

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/013560

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N9/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, Sequence Search, EMBASE, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

1 March 2005

Date of mailing of the international search report

18/03/2005

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>CHENG ZIGANG ET AL: "Highly divergent methyltransferases catalyze a conserved reaction in tocopherol and plastoquinone synthesis in cyanobacteria and photosynthetic eukaryotes."</p> <p>PLANT CELL, vol. 15, no. 10, October 2003 (2003-10), pages 2343-2356, XP002319368 ISSN: 1040-4651 cited in the application abstract page 2345, left-hand column, line 57 - right-hand column, line 5 page 2347, left-hand column, line 26 - right-hand column, line 17 page 2349, left-hand column, line 1 - line 12 figure 6 page 2351, left-hand column, line 12 - line 15 page 2352, right-hand column, line 50 - line 55</p>	1-28
Y	<p>MOTOHASHI REIKO ET AL: "Functional analysis of the 37 kDa inner envelope membrane polypeptide in chloroplast biogenesis using a Ds-tagged Arabidopsis pale-green mutant."</p> <p>PLANT JOURNAL, vol. 34, no. 5, June 2003 (2003-06), pages 719-731, XP002319369 ISSN: 0960-7412 cited in the application abstract page 720, left-hand column, line 22 - line 29 figure 3 page 724, left-hand column, line 5 - line 7 page 727, right-hand column, line 10 - line 14</p>	1-28
A	<p>ABELL ET AL: "biochemical approaches to herbicide discovery: advances in enzyme target identification and inhibitor design"</p> <p>WEED SCIENCE, WEED SCIENCE SOCIETY OF AMERICA, CHAMPAIGN, IL, US, vol. 44, 1996, pages 734-742, XP002094170 ISSN: 0043-1745 the whole document</p>	1-28

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## C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01/04330 A (SUNGEE GMBH & CO. KGAA; HERBERS, KARIN; BADUR, RALF; KUNZE, IRENE; GE) 18 January 2001 (2001-01-18) abstract page 13, line 40 - page 14, line 22 claims 9,10	1-28
Y	DATABASE EMBL APG1 Arabidopsis thaliana 1 December 2001 (2001-12-01), MOTOHASHI ET AL.: XP002319370 retrieved from EBI accession no. Q94IE2 abstract	1-28
Y	DATABASE EMBL 37kDa chloroplast inner membrane polypeptide 1 November 1996 (1996-11-01), BLOCK ET AL.: XP002319371 retrieved from EBI accession no. Q40501 abstract	1-28
Y	DATABASE EMBL N. tabacum mRNA for 37 kDa protein 30 June 1996 (1996-06-30), BLOCK ET AL.: XP002319372 retrieved from EBI accession no. X94968 abstract	1-28
Y	DATABASE EMBL A. thaliana mRNA for APG1 17 July 2001 (2001-07-17), MOTOHASHI ET AL.: XP002319373 retrieved from EBI accession no. AB054257 abstract	1-28
Y	WO 03/034812 A (MONSANTO TECHNOLOGY LLC) 1 May 2003 (2003-05-01) abstract sequence 28 claim 3	1-28

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### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 21-22 (partially)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 21-22 (partially)

Present claims 21 and 22 relate to a product/compound defined by reference to a desirable characteristic or property, namely an herbicidal/growth regulatory activity identified by action on 2-methyl-6-solanylbenzoquinone methyltransferase.

The claims cover all products/compounds having this characteristic or property, whereas the application provides no support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for such products/compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product/compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to antisense nucleic acids and inhibiting antibodies.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/013560

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0104330	A	18-01-2001	DE	19931834 A1	11-01-2001
			AU	5685800 A	30-01-2001
			CA	2378657 A1	18-01-2001
			WO	0104330 A1	18-01-2001
			EP	1194577 A1	10-04-2002
WO 03034812	A	01-05-2003	BR	0213499 A	03-11-2004
			CA	2463398 A1	01-05-2003
			EP	1444348 A2	11-08-2004
			WO	03034812 A2	01-05-2003
			US	2003150015 A1	07-08-2003